

Application Number

IDS Flag Clearance for Application 10673781

IDS Information

Content	Mailroom Date	Entry Number	IDS Review	Last Modified	Reviewer
M844	2003-09-29	15	Y <input checked="" type="checkbox"/>	2006-11-03 10:48:45.0	LCook
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updated Gorch
WCOOK 11/3/06

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(FILE 'HOME' ENTERED AT 13:04:21 ON 03 NOV 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 13:04:39 ON 03
NOV 2006

L1	2331 S ANTIBOD? AND MYOGLOBIN
L2	11 S L1 AND (CARBONIC ANHYDRASE III)
L3	5 DUPLICATE REMOVE L2 (6 DUPLICATES REMOVED)
L4	1039 S (CARBONIC ANHYDRASE III)
L5	1 S L4 AND STREPTAVIDIN?
L6	76 S L4 AND ANTIBOD?
L7	35 DUPLICATE REMOVE L6 (41 DUPLICATES REMOVED)
L8	2 S L7 AND BIOTIN?
L9	5 S L7 AND MYOGLOBIN?
L10	2 DUPLICATE REMOVE L8 (0 DUPLICATES REMOVED)
L11	5 DUPLICATE REMOVE L9 (0 DUPLICATES REMOVED)
L12	4 S L11 NOT L10
L13	179461 S (FUSION PROTEIN)
L14	3 S L13 AND L4
L15	3 DUPLICATE REMOVE L14 (0 DUPLICATES REMOVED)

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L12	4 S L11 NOT L10
L13	179461 S (FUSION PROTEIN)
L14	3 S L13 AND L4
L15	3 DUPLICATE REMOVE L14 (0 DUPLICATES REMOVED)

DUPLICATE 1

AN 1999:58935 BIOSIS

DN PREV199900058935

TI Production and characterization of monoclonal antibodies to human carbonic anhydrase III.

AU Azzazy, Hassan M. E. [Reprint author]; Cummings, Patrick J.; Ambrozak, David R.; Christenson, Robert H.

CS Univ. Md. Sch. Med., Dep. Med. and Res. Technol., 100 Penn St., Room 440E, Baltimore, MD 21201, USA

SO Hybridoma, (Dec., 1998) Vol. 17, No. 6, pp. 553-558. print.

CODEN: HYBRDY. ISSN: 0272-457X.

DT Article

LA English

ED Entered STN: 16 Feb 1999

Last Updated on STN: 16 Feb 1999

AB Carbonic anhydrase III (CAIII) is a cytosolic protein found almost exclusively in slow-oxidative skeletal muscle fibers. Upon excessive skeletal muscle activity or damage, CAIII is rapidly released into serum. CAM is not found in cardiac muscle, whereas the muscle protein myoglobin (Myo) is found in skeletal and cardiac muscle. Because CAIII and Myo are released from injured muscle in a constant ratio, an increase in the Myo/CA III ratio may be useful as an early diagnostic indicator of acute myocardial damage. Although several reliable Myo immunoassays have been established, no similar CAIII immunoassay is commercially available. We produced murine monoclonal antibodies (MAbs) to human CAIII using standard immunization and cell fusion procedures. Using an enzyme-linked immunoadsorbent assay (ELISA), three MAbs showed strong immunoreactivity with CAIII, but low to moderate levels of cross-reactivity with closely related isoenzymes CAI and CAII. The three MAbs demonstrated unique patterns of reactivity toward CAI, CAII, and CAIII, suggesting that different CAIII epitopes are recognized by the three MAbs. Specificity was further examined by Western blot analysis. These MAbs demonstrated potential for use in the development of an immunoassay for CAIII, and for investigating the biology of skeletal muscle injury in vivo.

CC Immunology - General and methods 34502

Cytology - Animal 02506

Biophysics - Methods and techniques 10504

Enzymes - Methods 10804

Enzymes - Chemical and physical 10806

Tissue culture, apparatus, methods and media 32500

Biochemistry studies - Proteins, peptides and amino acids 10064

IT Major Concepts

Enzymology (Biochemistry and Molecular Biophysics); Immune System (Chemical Coordination and Homeostasis); Methods and Techniques

IT Chemicals & Biochemicals

human carbonic anhydrase III; monoclonal antibodies: characterization, production

IT Methods & Equipment

cell culture: cell culture method, cell culture techniques; mini-PROTEAN II CELL apparatus: equipment; ELISA: detection method, detection/labeling techniques; SDS polyacrylamide gel electrophoresis: polyacrylamide gel electrophoresis, separation method; Western blot: detection method, detection/labeling techniques

ORGN Classifier

Muridae 86375

Super Taxa

Rodentia; Mammalia; Vertebrata; Chordata; Animalia

Organism Name

BALB/c mouse: Jackson Laboratories, female

Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

RN 9001-03-0 (CARBONIC ANHYDRASE)
9003-05-8 (POLYACRYLAMIDE)

ANSWER 5 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 2

AN 1992:117981 BIOSIS
DN PREV199293063781; BA93:63781
TI DUAL-LABEL TIME-RESOLVED FLUOROIMMUNOASSAY FOR SIMULTANEOUS DETECTION OF
MYOGLOBIN AND CARBONIC ANHYDRASE III
IN SERUM.
AU VUORI J [Reprint author]; RASI S; TAKALA T; VAANANEN K
CS DEACONESS INST OULU, SEPANKATU 17, SF-90100 OULU, FINLAND
SO Clinical Chemistry, (1991) Vol. 37, No. 12, pp. 2087-2092.
CODEN: CLCHAU. ISSN: 0009-9147. *✓ pull 11/3/06*
DT Article
FS BA
LA ENGLISH
ED Entered STN: 1 Mar 1992
Last Updated on STN: 2 Mar 1992
AB We developed a dual-labeled time-resolved fluorimunoassay for
simultaneous quantification of myoglobin (Mb) and
carbonic anhydrase III (CA III) in serum
involving polyclonal antibodies and the fluorescent lanthanides
europium (Eu³⁺) and samarium (Sm³⁺). This solid-phase immunoassay is
based on competition between Eu³⁺ or Sm³⁺-labeled antigen and the sample
antigen for polyclonal rabbit antibodies. Standards and
patients' samples containing antigen inhibit binding of the
lanthanide-labeled antigen to the antibody. A second
antibody directed against rabbit IgG is coated on a solid phase
and binds the IgG-antigen-lanthanide complex, giving rapid and complete
separation of antibody-bound and free antigen. The assay
required only one incubation step. An enhancement solution dissociates
Eu³⁺ and Sm³⁺ ions from the labeled CA III and Mb, respectively, into a
solution where they form highly fluorescent chelates. Spectra of the
fluorescent chelates in the microtitration-strip wells were run on a
time-resolved fluorometer equipped with filters for Eu³⁺ (613 nm) and Sm³⁺
(643 nm), the fluorescence from each sample being inversely proportional
to the concentration of antigens. The measurement range for both analytes
is from 5 to 1500 µg/L. The mean within-and between-assay precisions
(CV) were 4.6% and 6.2% for CA III and 5.9% and 7.3% for Mb,
respectively. Good correlations were obtained with the results of CA III
RIA and a commercial myoglobin RIA kit.
CC Clinical biochemistry - General methods and applications 10006
Biochemistry methods - Proteins, peptides and amino acids 10054
Biochemistry studies - Proteins, peptides and amino acids 10064
Biochemistry studies - Carbohydrates 10068
Enzymes - Methods 10804
Enzymes - Chemical and physical 10806
Enzymes - Physiological studies 10808
Blood - General and methods 15001
Blood - Blood and lymph studies 15002
Immunology - General and methods 34502
IT Major Concepts
Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport
and Circulation); Clinical Chemistry (Allied Medical Sciences);
Enzymology (Biochemistry and Molecular Biophysics); Immune System
(Chemical Coordination and Homeostasis)
IT Miscellaneous Descriptors
HUMAN IMMUNOGLOBULIN G SAMARIUM ION EUROPIUM ION RADIOIMMUNOASSAY
ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates
RN 9001-03-0 (CARBONIC ANHYDRASE)
7440-19-9 (SAMARIUM)

7440-53-1 (EUROPIUM)

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AU VUORI J [Reprint author]; RASI S; TAKALA T; VAANANEN K
CS DEACONESS INST OULU, SEPANKATU 17, SF-90100 OULU, FINLAND
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updated Search
L/Cook 11/3/06.

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(FILE 'HOME' ENTERED AT 17:33:45 ON 03 NOV 2006)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:34:10 ON 03 NOV 2006

L1 428 S (ANTIBOD? CONJUGATE) AND STREPTAVIDIN?
L2 0 S L1 AND (CARBONIC ANHYDRASE III)
L3 368 DUPLICATE REMOVE L1 (60 DUPLICATES REMOVED)
L4 210 S L3 AND PD<2000
L5 9 S L4 AND POLYNUCLEOTIDE?
L6 4 S L4 AND POLYPEPTIDE?
L7 22 S L4 AND SINGLE?
L8 2 S L5 AND L7
L9 0 S L8 AND L6
L10 0 S (ANTIBOD? FUSED STREPTAVIDIN)
L11 0 S (ANTIBOD? BOUND STREPTAVIDIN)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, JAPIO' ENTERED AT 17:51:25 ON 03 NOV 2006

L12 123 S (STREPTAVIDIN ANTIBOD?)
L13 48 S L12 AND PD<2000
L14 38 DUPLICATE REMOVE L13 (10 DUPLICATES REMOVED)
L15 0 S L14 AND (CARBONIC ANHYDRASE)
L16 0 S L14 AND MYOGLOBIN?
L17 2 S L12 AND MYOGLOBIN?

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AN 92281259 EMBASE

DN 1992281259

TI Reversible immobilization of antibodies on magnetic beads.

AU Scouten W.H.; Konecny P.

CS Chemistry Department, Baylor University, Waco, TX 76798, United States

SO Analytical Biochemistry, (1992) Vol. 205, No. 2, pp. 313-318. .

ISSN: 0003-2697 CODEN: ANBCA2

CY United States

DT Journal; Article

FS 026 Immunology, Serology and Transplantation

029 Clinical Biochemistry

LA English

SL English

ED Entered STN: 11 Oct 1992

Last Updated on STN: 11 Oct 1992

AB A streptavidin-biotin system was utilized to prepare an antibody-polyadenylic acid conjugate which was subsequently attached to commercially available magnetic beads, Dynabeads oligo(dT)25. Biotinylated polyadenylic acid was combined with streptavidin and the resulting polyadenylic acid-streptavidin was conjugated with an antibody-biotin derivative. The immobilized antibody-polyadenylic acid conjugate was separated from the reaction mixture by hybridization with complementary oligonucleotide immobilized on the surface of Dynabeads oligo(dT)25. The immobilized antibody-polyadenylic acid can be released from the carrier, utilizing low-ionic-strength buffers. The system is intended to be utilized in cell sorting, using immobilized antibodies against cell surface antigens. Dissociation of antibody-containing conjugate from magnetic beads is essential for the isolation of viable cells via positive cell sorting.

CT Medical Descriptors:

*immobilization

article

biology

cell function

cell selection

cell viability

hybridization

priority journal

Drug Descriptors:

*antibody

*biotin

*complimentary oligodeoxynucleotide

*membrane antigen

*polyadenylic acid

*streptavidin

antibody conjugate

polynucleotide

unclassified drug

RN (biotin) 58-85-5; (polyadenylic acid) 24937-83-5; (streptavidin)

9013-20-1

=>

ANSWER 9 OF 9 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN

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*immobilization

article

biology

cell function

cell selection

cell viability

hybridization

priority journal

Drug Descriptors:

*antibody

*biotin

*complimentary oligodeoxynucleotide

*membrane antigen

*polyadenylic acid

*streptavidin

antibody conjugate

polynucleotide

unclassified drug

RN (biotin) 58-85-5; (polyadenylic acid) 24937-83-5; (streptavidin) 9013-20-1

=>

AN 1998:427289 CAPLUS
 DN 129:94191
 ED Entered STN: 11 Jul 1998
 TI Development of a streptavidin-conjugated single-chain antibody that binds *Bacillus cereus* spores
 AU Koo, Kai; Foegeding, Peggy M.; Swaisgood, Harold E.
 CS Department of Food Science, North Carolina State University, Raleigh, NC, 27695-7624, USA
 SO Applied and Environmental Microbiology (1998), 64(7), 2497-2502
 CODEN: AEMIDF; ISSN: 0099-2240
 PB American Society for Microbiology
 DT Journal
 LA English
 CC 15-3 (Immunochemistry)
 Section cross-reference(s): 17
 AB Control of microorganisms such as *Bacillus cereus* spores is critical to ensure the safety and a long shelf life of foods. A bifunctional single chain antibody has been developed for detection and binding of *B. cereus* T spores. The genes that encode *B. cereus* T spore single-chain antibody and streptavidin were connected for use in immunoassays and immobilization of the recombinant antibodies. A truncated streptavidin, which is smaller than but has biotin binding ability similar to that of streptavidin, was used as the affinity domain because of its high and specific affinity with biotin. The fusion protein gene was expressed in *Escherichia coli* BL21 (DE3) with the T7 RNA polymerase-T7 promoter expression system. Immunoblotting revealed an antigen specificity similar to that of its parent native monoclonal antibody. The single-chain antibody-streptavidin fusion protein can be used in an immunoassay of *B. cereus* spores by applying a biotinylated enzyme detection system. The recombinant antibodies were immobilized on biotinylated magnetic beads by taking advantage of the strong biotin-streptavidin affinity. Various liqs. were artificially contaminated with 5×10^4 *B. cereus* spores per mL. Greater than 90% of the *B. cereus* spores in phosphate buffer or 37% of the spores in whole milk were tightly bound and removed from the liquid phase by the immunomagnetic beads.
 ST streptavidin antibody *Bacillus* spore
 IT Spore
 (T; streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)
 IT Antibodies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (single chain; streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)
 IT *Bacillus cereus*
 Food preservation
 (streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)
 IT Fusion proteins (chimeric proteins)
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)
 IT 9013-20-1DP, Streptavidin, antibody conjugates
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)
 RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

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RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(single chain; streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)IT *Bacillus cereus*

Food preservation

(streptavidin-conjugated single-chain antibody binds *Bacillus cereus* T spores)

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RE

- (1) Argarana, C; Nucleic Acids Res 1986, V14, P1871 CAPLUS
- (2) Bassam, B; Anal Biochem 1991, V196, P80 CAPLUS
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